

substitute Specification includes the suggested changes noted in the Office Action along with additional clarification changes. Since the Specification has been replaced for clarification purposes only, the substitute Specification does not present new matter.

In the Claims:

Please amend claims 1-19 and 21 as shown in Attachment C. For clarity purposes, the entire set of pending claims has been included in Attachment C. A “marked-up” version of the amended claims is documented in Attachment D.

REMARKS

The specification has been replaced by a substitute specification for clarification purposes only. Claims 1-19 and 21 have been amended. Thus, claims 1-21 are currently pending in the case. Further examination and reconsideration of the presently claimed application is respectfully requested.

Objections to the Drawings:

The drawings were objected to under 37 CFR § 1.83(a) in reference to the “Inconel valve” of claim 11 and the “clamp” of claim 12. To expedite prosecution, claims 11 and 12 have been amended without prejudice or disclaimer as to the subject matter recited herein. Claim 12 has been amended to remove the “clamp” component. Claim 11 has been amended to recite: “The gas scrubber according to claim 9, wherein each of the multiple heat exchange units comprises an Inconel® tube.” As cited on page 12, lines 16-17, “[t]he exhaust gas gains heat by passing through the heat exchange unit, or Inconel® tube, 15.” Hence, for at least one embodiment of the presently claimed case, a gas scrubber includes a heat exchange unit comprising an Inconel® tube, which may be represented by component 15 in the drawings. The amendments of claims 11 and 12 are believed to clarify the language of the claims and the drawing features in a manner that addresses the concerns expressed in the Office Action without

introducing new matter. Accordingly, the removal of the objection to the drawings is respectfully requested.

Objections to the Specification:

The Specification was objected to for informalities. The Examiner's thorough reading of the Specification is appreciated. As noted above, the original Specification has been replaced by a substitute Specification pursuant to 37 CFR § 1.121(b)(3) and 37 CFR § 1.125(b). The substitute Specification includes the suggested changes noted in the Office Action along with additional clarification changes. Since the Specification has been replaced for clarification purposes only, the substitute Specification does not present new matter. Consequently, the removal of the objection to the Specification is respectfully requested.

Section 112 Rejections:

Claims 3-5 and 7-21 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. To expedite prosecution, claims 3-5 and 7-21 have been amended. These amendments are believed to clarify the claim language in a manner that addresses the concerns about those claims expressed in the Office Action. Accordingly, the removal of the § 112, second paragraph, rejection of claims 3-5 and 7-21 is respectfully requested.

Section 103(a) Rejections:

Claims 1-3, 5-8, 14, 15, and 18-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,900,217 to Hartung et al ("Hartung"). Claims 4, 9-13, 16, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartung in view of Korean Patent No. 97-9311 to Kim ("Kim"). To establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. As will be set forth in more detail below, the removal of the § 103(a) rejections of claims 1-21 is respectfully requested.

None of the cited art teaches or suggests a gas scrubber comprising a means for minimizing the production and/or accumulation of a powder at the interface between a combustion chamber and a wetting chamber during the operation of the gas scrubber.

Amended claim 1 recites, in part:

A gas scrubber comprising . . . an injection nozzle having an opening adapted to deliver a conditioned gas above the guide plate during operation of the gas scrubber for minimizing the production and/or accumulation of a powder at an interface between the combustion chamber and the wetting chamber. (emphasis added)

Amended claim 7 is similarly stated. Neither Hartung nor Kim present a means for minimizing the production and accumulation of a powder at an interface between a combustion chamber and a wetting chamber. Hartung discloses a cleaning mechanism comprising nozzle ring 19.

However, such a mechanism may be employed only when the gas scrubber is not in operation.

“For cleaning the inside of the inner pipe 16, there is, at the upper end of this pipe 16 at the cover 5, a nozzle ring 19, with which water or an absorbent can be sprayed onto the inside of the inner pipe 16 during pauses in the operation, so that deposits there can be removed or reduced.”

(Hartung -- col. 5, lines 11-15, emphasis added.) As such, the method of Hartung removes pre-formed particulates rather than minimizing the production and/or accumulation of powder as in the presently claimed case. Furthermore, the cleaning mechanism of Hartung does not clean the interface between combustion space 6 and scrubbing space 7. On the contrary, Hartung only cleans the inner surface of pipe 16, which is positioned entirely within combustion space 6. Kim does not teach or suggest a means for minimizing the production or accumulation of a powder at an interface between a combustion chamber and a wetting chamber. As shown, none of the cited art teaches or suggests the limitations of claims 1 or 7. Claims 2-6 and 8-21 are dependent from claims 1 and 7, respectively; therefore, they are patentably distinct over the cited art for at least the same reasons. Accordingly, removal of the § 103(a) rejections of claims 1-21 is respectfully requested.

In addition to being patentably distinct for reasons set forth above, several of the dependent claims are believed to be separately patentable for reasons set forth below.

In regard to dependent claim 6, a conditioned gas is delivered between the combustion chamber and wetting chamber such that the gas directed from the combustion chamber does not directly contact a substantial portion of the gas in the wetting chamber. Neither Hartung nor Kim teach or suggest introducing a conditioned gas between a combustion chamber and a wetting chamber to prevent the gas in combustion chamber in coming in contact with the gas in the wetting chamber. Thus, claim 6 is patentably distinct over the cited art.

Claim 9 references the arrangement of multiple heat exchange units. Claim 9 recites in part, “[t]he gas scrubber according to claim 8, wherein said heating means includes . . . multiple heat exchange units arranged in a pattern of rows inside said heating chamber . . . (emphasis added).” As stated in the Office Action, Hartung fails to disclose multiple heat exchange units. Kim, however, does disclose multiple heat exchange units. However, the heat exchange units of Kim are specifically arranged in a v-shaped pattern in order to maximize the capacity of the combustion chamber. Therefore, there is no motivation within Kim to arrange the heat exchange units in a pattern of rows.

NOTICE OF CHANGE OF ADDRESS

The Commissioner is respectfully requested to change the correspondence address to the following:

Kevin L. Daffer
Conley, Rose & Tayon, P.C.
P.O. Box 398
Austin, Texas 78767-0398

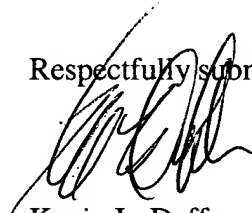
CONCLUSION

In this response, the Specification has been replaced by a substitute specification. Claims 1-19 and 21 have been amended and Applicants have responded to the rejections of claims 1-21. Therefore, this response constitutes a complete response to all of the issues raised in the Office Action dated October 4, 2000. In view of the remarks traversing the rejections in the Office Action, Applicants assert that pending claims 1-21 are in condition for allowance. If the

Examiner has any questions, comments, or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees, which may be required, or credit any overpayment, to Conley, Rose & Tayon, P.C. Deposit Account No. 50-1505/5480-00200.

Respectfully submitted,



Kevin L. Daffer
Reg. No. 34,146
Attorney for Applicants

Conley, Rose & Tayon, P.C.
P.O. Box 398
Austin, TX 78767-0398
Ph: (512) 476-1400
Date: January 4, 2001
MEH